

fortably to town, and at noon was perfect in his part, at the rehearsal on the stage at Drury Lane Theatre.

"But his love of entomology, or exercise, was not the only inducement in the case of the Dartford Blues; he had, he says, another strong motive, and this was, the having promised a little collection of insects to 'one of the most charming women of her age'—the lamented Mrs. Jordan, at that time a member of the Drury Lane Company."—Hx.J.T.

A supposed Hybrid Polyommatus (coridon-hylas). (With two plates.)

By O. R. GOODMAN, F.Z.S., F.E.S.

At the South London Entomological Society's Meeting on May 8th, 1924, I exhibited a male Lycaenid butterfly taken on July 21st, 1922, in the Val d'Ossoue, Gavarnie, Hautes Pyrenees, France, which I have been unable to identify with any certainty.

I submitted the specimen to Mr. Tonge for his opinion; he compared it with the two hybrid *coridon* \times *thetis* males *polonus*, which he exhibited a little time ago, and he came to the conclusion that it could not be a *thetis* hybrid. I then searched my notebooks and ascertained, without doubt, that *thetis* was entirely absent from Gavarnie during our visit. *Coridon*, however, was in great abundance and was of the very constant form found in the Pyrenees; it flew in company with a rather small form of *P. hylas*, which it greatly resembles in the tone of the underside, and also in company with *P. escheri*, from which it differs in many characteristics. An examination of the specimen exhibited reveals that the blue scaling of the upper side partakes both of the silvery blue of *coridon* and of the brilliant sky-blue of *hylas*, being almost intermediate in shade. The underside also resembles both species in different characteristics, namely:—

Coridon:—1. In the presence of dark crescentic markings on the marginal band of the forewings.

2. In the position, arrangement, and shape of the discoidal and other spots in the central area of the forewings.

3. In the heavier dusting of blue scales at the base of the wings.

Hylas:—1. In the browner tone colour of all the wings.

2. In the larger size of the spots in the central area of the forewings.

3. In the presence of an extra spot near the costa (absent in *coridon*).

4. In the absence of a basal spot (present in *coridon*).

These resemblances seem to indicate that it is possibly a hybrid *coridon* \times *hylas*, which cross I believe has not been previously recorded.

A supposed Hybrid Polyommatus (coridon-hylas).

By Hx. J. TURNER, F.E.S.

The insects in question were passed on to me for my opinion after they had been submitted to Mr. F. N. Pierce for morphological examination. Before reading the opinions of Mr. Pierce, based upon his preparations, I thought it better to examine the specimens in

detail. This I did and the following is a category of the observations I made.

1. *P. escheri* may at once be ruled out. Its colour, shape, and underside markings both in general and in detail at once decide its exclusion.

2. SHAPE AND SIZE.—The specimen is the size of a somewhat small *coridon*, and resembles *coridon* not *hylas* in general shape. The apex of the forewing favours that of *coridon* rather than *hylas*. The very slight incurve above the middle of the hind-margin of the forewing is exactly as occurs in most *coridon*, but which is never present in *hylas*. The costa is straighter as in *coridon* and there is not the curvature present in *hylas*.

3. GENERAL COLORATION OF THE UPSIDE.—A comparison was made with a very large number of *coridon* ♂ and about 70 *hylas* ♂. The colour is between that of normal *coridon* and normal *hylas*, but much nearer that of *hylas* with the silkiness and somewhat of the "changing colour" of *coridon*. This impression is heightened by the absence of the outer marginal, widish band of dark suffusion, present in *coridon*, but absent in both *hylas* and the specimen.

[NOTE.—In conjunction with Mr. N. D. Riley, Mr. W. H. T. Tams and my son, I endeavoured to match the colour with Ridgways *Color Standards*, but had to abandon the attempt, as we all materially differed in our opinions, no doubt owing to the colours of the book being "flat," whereas the *Lycaenid* blues are mainly what may be called "changing colours" depending on the angle of view, incidence of light; etc. It was suggested that in the *Lycaenidae* a special code of colours might be adopted for comparison, e.g., *coridon*-blue, *icarus*-blue, *hylas*-blue, etc.]

It was suggested that the specimen might be one of the blue *coridon* forms with which the late Dr. Chapman made us familiar some years ago. Mr. Goodman and I compared these ab. *lilacina*, etc., and at once saw there was no conformity with the specimen.

4. MARKINGS OF THE FOREWINGS.—The veins in the specimen are slightly emphasised near the outer margin just as in *hylas*, but this emphasis does not extend half-way across the wing as is the rule in *coridon*. The dark marginal line is wider somewhat than in an average *hylas* and not the extended cloud which is invariably more or less present in *coridon* as a conspicuous character. This cloud in *coridon* contains at least traces of a row of eyespots, which traces are not found in any *hylas*, nor has the specimen any such traces and thus is conformable to *hylas*.

5. MARKINGS OF THE HINDWING.—On the hindwing the marginal line is very fine and sharply expressed and there are internally to this line a series of unattached round black spots, well-defined. Between these spots and the marginal line are patches of white scales. Such black spots, with light scaling even extending all round them as a ring are the regular markings of *coridon*, in fact a strong feature. Black spots occur very occasionally in *hylas* in this position, but always more fuzzy and indefinitely separated from the marginal line, with never the slightest trace of lighter scaling around them. The spot in the anal angle of the specimen is a distinct double one just exactly as is present in normal *coridon*, with the white edgings of the double spot united in both. The 3rd and 4th spots from the anal angle are

somewhat less in size, but such disalignment cannot be traced in spotted *hylas*.

6. MARKING OF THE FRINGES.—The fringe of the forewing of the specimen is marked with dark fanshaped chequers opposite the ends of the veins, not very prominent, but clear, exactly as in many *coridon*. On the hindwing the chequers are represented by two or three dark hairs per vein. Such chequering never appears in any form in *hylas* even under a lens. *Hylas* has the base of the fringe of the forewing of a brown colour, a character which one cannot trace in *coridon*, nor in the specimen.

7. GENERAL COLOUR OF THE UNDERSIDE.—The striking characteristic contrast of light fringe and marginal area with the rest of the ground colour of both wings in *hylas* is in no way even suggested in the specimen. There is the usual contrast such as occurs in *coridon* between the ground of the fore and the hindwing, a contrast which scarcely exists in *hylas* underside.

8. MARKINGS OF THE FOREWING BELOW.—The discoidal spot has the same shape as that of *coridon*, sharpened at one or both ends, not rounded at both as always happens in *hylas*. The basal spots are absent in the specimen as they are normally in *hylas*. In *coridon* there are generally two, but sometimes only one. The transverse row of eyespots, have the double spot of the inner margin small and well-defined as in all *coridon*. In *hylas* this double spot is always larger and more diffuse in definition. The spots of this row are about the average size of those of *coridon*, whereas in nearly all specimens of *hylas* they are larger and the second from the inner margin is quite out of alignment, whereas in *hylas* the second spot is either in the alignment or only slightly out of it as a rule. The spots of this row appear more prominent because they follow *hylas* in being surrounded by a ring of pure white. There is not so much suppression of definiteness in the marginal spots, chevrons and rings as often occurs in *coridon*, and which ends in practically total suppression in *hylas*.

9. MARKINGS OF THE HINDWING BELOW.—Marginal and submarginal markings in the specimen are as well developed as in average *coridon*, but in no way suppressed as they are in most *hylas*. The white discoidal blotch has a dusky centre like many *coridon*, which centre in most *hylas* is absent. (The Gavarnie *coridon* generally have the white blotch large without the dusky centre.) The shape of the red chevrons on the margin of the hindwing is that of *coridon* and not the sharp-pointed wedges as in *hylas*, and of the dull orange of average *coridon* and not the bright orange of *hylas*, where the chevrons always show more prominently than in *coridon*. In *hylas* the marginal black dots are a very deep black and very clearly and sharply defined. They are not so in this specimen but favour those in the average *coridon*. The double spot at the marginal end of the transverse row is just as expressed in *hylas*.

The great preponderance of the above facts seem to suggest an aberrant form of *coridon* with a leaning towards *hylas*, which may, or may not, have been caused by irregular copulation of *coridon* with *hylas*; the probability is opposed to the hybrid origin.

A supposed Hybrid *Polyommatus* (*coridon*=*hylas*).

By F. N. PIERCE, F.E.S.

The specimen is interesting, in so much as it does not exactly follow any of the other species. This may be due to assumption that it is a hybrid. In the various forms of hybrids that I have examined, I find the male generally adopts a new form of genitalia unlike the males of either parent. In the females the genital organs usually produce a mix-up. Now the male genitalia of the "Blues" run very close to each other. In our examination of *coridon* and *thetis*, it was not until we had prepared some dozen specimens of each species, that we were enabled to detect a constant difference. All other differences broke down *inter se*, therefore it might be reasonably expected that a cross between species, so closely resembling each other, would not produce anything really abnormally different, but would reproduce the parents' form with minute differences, possibly tending towards one parent.

GENITALIA.—With regard to your specimens, I have made a preparation of each of the species adding the ♀ where possible, and I find that we can at once exclude *hylas*, as being quite a distinct species from the others. The costa of the genitalia is squared, in the other three specimens it is curved and acuminate. Pl. II.

Then again the androconial scales are quite different from the others, those of *hylas* being long and narrow. As the specimen does not show either of these forms I think we can safely exclude it from the list. Pl. III.

Escheri has minor differences, which seem to eliminate it also, although this species is much more the common *coridon-thetis* type, leaning towards *thetis*, with which it has much in common.

The whole genitalia shows in point of size *coridon* largest; sp. ? next; *escheri* next and *hylas* the smallest. In this the sp. ? is nearest to *coridon*.

Again the penis is longest in *coridon*; sp. ? next; whilst *hylas* and *escheri* are both shorter. In this the sp. ? is nearest to *coridon*.

The tip of the costa is acutely pointed as it also is in the sp. ? whereas in *escheri* the tip is less acute and is (as stated) squared in *hylas*. In this the sp. ? is practically the same as *coridon*. Pl. III.

It was in the uncus, in which we found the most constant form of difference in *coridon* and *thetis*. In *coridon* it is roughly dentate; in sp. ? it is dentate perhaps not quite so roughly as in *coridon*; but in *hylas* it is almost plain (*thetis* form) and in *escheri* it is similar. Again the sp. ? approaches nearest to *coridon*.

The tip of the valvule in *coridon* is long before it breaks away almost at right angles. In the sp. ? it is long, but the break away is not quite so angular. In *escheri* the break away is a gentle curve from a shorter tip. In *hylas* the tip is much narrower, and the break away is a gentle curve. Pl. III.

In this the sp. ? comes nearest to *coridon*.

SCALES.—The blue scales contribute not a little to the whole question. In *coridon* the colour by transmitted light shows the scales bluish-purple. In the sp. ? they are orange-bluish. In *hylas* they are yellowish-orange with a tinge of blue. In *escheri* they are bright-yellow with just a tinge of blue towards the base. In this

respect the scales seem to be really intermediate between *coridon* and *hylas*, again approaching *coridon*.

The androconials are difficult to compare individually and vary *inter se*. At the same time there is a general type to each species. In *coridon* the androconial is a broad battledore, with a fairly long handle.

In the sp.? the scales are similar. In *escheri* the handle is considerably shorter. In *hylas* the scales are long and narrow with a long handle. Pl. III.

In this feature I should have no hesitation in placing the sp.? down to *coridon*.

A new race of *Cidaria* (Thera) *variata*, Schiff.

By H. J. TURNER, F.E.S.

Two series of *T. variata*, the species attached to spruce, lie before me.

The first series bred from larvae taken at Klosterneuberg near Vienna, by Herr Carl Höfer, consists of 8 examples typical of the district, 5 of the dark form *obscura*, Höf., which was long confused with the var. *scotica*, Stdgr., of *T. obeliscata*, 2 of a brown form of *variata* suggestive of some *obeliscata* in a way, and 1 of a somewhat semitransparent form of an albino character.

The second series bred from larvae taken near Southampton, by Mr. Wm. Fassnidge, consists of 12 specimens including one or two dark somewhat unicolorous examples for which the name *obscura*, Höf., may be adopted, and 2 of the semitransparent form suggestive of the similar form from Vienna.

These two races when compared show decided general differentiation, although the specific markings are all present and remarkably similar, yet there is not a specimen in one series, which can be found duplicated in the other, unless it be the so called "albino" forms which are remarkably similar, and dwarf in both series. Whereas the term "brown" at once comes into one's mind on looking at the Austrian race, the predominating grey being on the brown-gray side, it is not so with the British race of *variata*, which are of a beautiful, soft, delicate grey of quite a different appearance, only the two darker examples of the ab. *obscura* form indicating a slight tendency to brown. In the British series there seems less contrast between the band and the general ground than in the Austrian race, where the band is emphasised by a clear white edging on both sides. The latter series also shows less individual variation.

In assessing the "general coloration" one's mind is always influenced by the ground colour of the hindwing, which is, as a rule, when not obscured by designs, indicative of the general ground colour of the whole wing surface, which underlies the markings of the forewings.

This British race, as exemplified by the Southampton specimens, I propose to name **britannica** n. race. I may say that Mr. Prout has been able to see both series and to note the marked racial difference of our British form.